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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/957,047	09/20/2001	Scott Parkhill	130209.433	3174

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SEED INTELLECTUAL PROPERTY LAW GROUP PLLC
701 FIFTH AVE
SUITE 6300
SEATTLE, WA 98104-7092

EXAMINER

HYEON, HAE M

ART UNIT PAPER NUMBER

2839

DATE MAILED: 10/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

EC

Office Action Summary	Application No. 09/957,047	Applicant(s) PARKHILL ET AL.	
	Examiner Hae M Hyeon	Art Unit 2839	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 13-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 13-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 13 May 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Election/Restrictions

1. The examiner withdraws the election of Species requirement made on July 11, 2003.

Drawings

2. The corrected or substitute drawings were received on May 13, 2003. These drawings are approved.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 13-28 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 29 does not recite with what that the second end portion is electrically couplable to form a non-pressure engagement electrical connection.

5. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: The position of the compliant portion of the conductive element related to the first and second end portions or intermediate portion of the conductive element.

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Claims 1-9 simply recite that the compliant portion is deformable between a compressed position and a decompressed position, but the claims do not recite the location of the compliant portion related to the first and second end portions or intermediate portion. Thus, it is not clear where is the compliant portion in the conductive element.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 3, 4, 6-9 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Bishop (5,967,800).

Bishop discloses a conductive element 20 comprising a first end portion 24, a second end portion 26, and a compliant portion 36. The first end portion 24 forms an electrical connection with a substrate (not shown) when the compliant portion 36 is in a compressed position. The substrate applies pressure to the compliant portion 36. The compliant portion 36 is situated between the first and second end portions. The first end portion 24 extends inward to the second end portion 26. The compliant portion 36 is curved inward to the second end portion 26. When the compliant portion 36 is in the compressed position, the first end portion 24 is biased into

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physical engagement with the substrate to form an electrical connection with the substrate and the second end portion 26 is unbiased and electrically couplable to form a non-pressure engagement electrical connection. A substrate where the second end portion 26 is mounted applies pressure, which is equal and opposite to the pressure applied to the compliant portion 36 by the substrate engaging the first portion 24, to the compliant portion 36.

8. Claims 1, 2, 4, 5, 7-9 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Braun (5,586,890).

Braun discloses a conductive element 210 comprising a first end portion 214, a second end portion 212, and a compliant portion (the place where the reference number 210 is pointing in Figure 7). The first end portion 214 forms an electrical connection with a substrate 221 when the compliant portion is in a compressed position. The compliant portion is situated between the first 214 and second 212 end portions. The first end portion 214 extends outward from the second end portion 212. The compliant portion is curved outward from the second end portion 212. When the compliant portion is in the compressed position, the first end portion 214 is biased into physical engagement with the substrate to form an electrical connection with the substrate 221 and the second end portion 212 is unbiased and electrically couplable to form a non-pressure engagement electrical connection. A substrate where the second end portion 212 is mounted applies pressure, which is equal and opposite to the pressure applied to the compliant portion by the substrate engaging the first portion 214, to the compliant portion.

9. Claims 29, 30, 32, 33, and 35-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Tanaka (6,227,870 B1).

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Tanaka discloses a conductive element 10 comprising a first end portion 14, a second end portion 15, two compliant portions (portions adjacent to the notches 18 and 19), and an intermediate portion 11-13. The first end portion 14 forms an electrical connection with a first contact 22p of a substrate 22. The second end portion 15 forms an electrical connection with a second contact 22q of the substrate 22. The intermediate portion 11-13 and the compliant portions are situated between the first end portion 14 and the second end portion 15. When the compliant portions are in a compressed position, the first end portion 14 and the second end portion 15 are biased into physical engagement with the substrate 22 to form electrical connections with the first contact 22p and the second contact 22q, respectively. The compliant portions are curved and extend inward to each other. Figures 2 and 5 show the compliant portions in a compressed position and a decompressed position.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Kroske (6,031,730).

Claims 31 and 34 recite that the first and second end portions extend outward from each other and the compliant portions are curved outward from each other.

While Tanaka only discloses the first and second end portions extending inward from each other and the compliant portions being curved inward from each other, Kroske discloses a conductive element having one or more compliant portions being curved both inward and outward from each other (see Fig. 7A-7F) such that the conductive element is capable of being expanded or compressed as necessary. Also, the conductive element of Kroske has first and second end portions extending outward from each other.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the conductive element taught by Tanaka such that it would have the first and second end portions and the compliant portions extending outward from each other as taught by Kroske because the conductive element would be capable of being expanded or compressed as necessary.

12. Claims 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Audet et al (6,302,702 B1).

Claims 39 and 40 recites a fastener being the means for compressing wherein the fastener is a bolt. However, Tanaka does not disclose a fastener, but Audet discloses a compressible conductive element 1 being compressed by using a bolt. Also, the official notice is taken that fasteners such as a screw, bolt and nut, a rivet, an adhesive, and a latch are commonly known.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device taught by Tanaka such that it would use a bolt as taught by Audet to securely hold the conductive elements in place and provide the means for compressing at the same time.

Allowable Subject Matter

13. Claims 13-28 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Response to Arguments

14. Applicant's arguments with respect to claims 1-9 and 13-40 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No. 5,879,169 by Wu.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M Hyeon whose telephone number is 703-308-4802. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D Feild can be reached on 703-308-2710. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Any response to this action may be mailed to:

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

For additional information regarding this new address, which was effective May 1, 2003, see *Correspondence with the United States Patent and Trademark Office*, 68 Fed. Reg. 14332 (March 25, 2003).

Or Faxed to:

(703) 308-7722 or 308-7724

(Informal or draft communications should be clearly labeled "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to:

Crystal Plaza 4, Fourth Floor (Receptionist)

2201 South Clark Place, Arlington, Virginia.

Hae M Hyeon

Examiner

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hnh

hnh

Hae Moon Hyeon